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Michael Nyle Hershberger

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THE PROCTER & GAMBLE COMPANY  
Global Legal Department - IP  
Sycamore Building - 4th Floor  
299 East Sixth Street  
CINCINNATI, OH 45202

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SCHLIENTZ, NATHAN W

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* MICHAEL NYLE HERSHBERGER

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Appeal 2011-003584  
Application 10/758,997  
Technology Center 1600

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Before DONALD E. ADAMS, DEMETRA J. MILLS, and  
JEFFREY N. FREDMAN, *Administrative Patent Judges*.

FREDMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to a liquid composition which the Examiner has rejected under grounds of obviousness. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

*Statement of the Case*

*Background*

The Specification teaches “a stable liquid supplement composition that may optionally be admixed or otherwise administered with one or more medicaments allows the owner of a companion animal to administer effective and metered quantities of a medicament on an as need basis, such as daily, weekly or monthly” (Spec. 5, ll. 11-14).

*The Claims*

Claims 1-7 are on appeal<sup>1</sup>. Claim 1 is representative and reads as follows:

1. A liquid composition comprising:  
beet pulp;  
a medicament;  
a flavorant; and,  
water;  
wherein said composition is essentially free of sugars  
and is adapted for use by a companion animal.

*The issues*

A. The Examiner rejected claims 1-5 under 35 U.S.C. § 103(a) as obvious over Chu,<sup>2</sup> Burkhalter,<sup>3</sup> Sunvold,<sup>4</sup> Fahey,<sup>5</sup> Sunvold ‘258,<sup>6</sup> Ježek,<sup>7</sup> and Desforges<sup>8</sup> (Ans. 3-4).

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<sup>1</sup> Appellant cancelled claims 15-19 (*see* App. Br. 2)

<sup>2</sup> Chu et al., US 2002/0025325 A1, published Feb. 28, 2002.

<sup>3</sup> Burkhalter et al., *The Ratio of Insoluble to Soluble Fiber Components in Soybean Hulls Affects Ileal and Total-Tract Nutrient Digestibilities and Fecal Characteristics of Dogs*, 131 J. NUTRITION 1978-1985 (2001).

B. The Examiner rejected claims 1-7 under 35 U.S.C. § 103(a) as obvious over Tinembart,<sup>9</sup> Chu, Burkhalter, Sunvold, Fahey, Sunvold ‘258, Ježek, and Desforges (Ans. 5-6).

A. 35 U.S.C. § 103(a) over Chu, Burkhalter, Sunvold, Fahey, Sunvold ‘258, Ježek, and Desforges

The Examiner finds that it obvious “to add beet pulp fiber to the composition of Chu et al. because beet pulp fiber is well-known as a commercial source of dietary fiber for use in pet foods, and soluble beet fiber has cholesterol lowering properties (i.e., hypocholestromic effect), and a beneficial effect on blood glucose and mineral availability, as reasonably taught by Desforges et al” (Ans. 6).

Appellant contends that “even though Burkhalter, Sunvold, Fahey, and Sunvold ‘258 teach beet pulp, they are teaching the addition of beet pulp

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<sup>4</sup> Sunvold et al., *Dietary Fiber for Cats: In Vitro Fermentation of Selected Fiber Sources by Cat Fecal Inoculum and In Vivo Utilization of Diets Containing Selected Fiber Sources and Their Blends*, 73 J. ANIMAL SCIENCE 2329-2339 (1995).

<sup>5</sup> Fahey et al., *Dietary Fiber For Dogs: I. Effects Of Graded Levels Of Dietary Beet Pulp On Nutrient Intake, Digestibility, Metabolizable Energy And Digesta Mean Retention Time*, 68 J. ANIMAL SCIENCE 4221-4228 (1990).

<sup>6</sup> Sunvold, Gregory Dean, US 5,932,258, issued Aug. 3, 1999, hereinafter “Sunvold ‘258”.

<sup>7</sup> Ježek et al., *Production of Soluble Dietary Fibres from Sugar Beet Pulp with Betanaza T. Enzyme In the Extrusion Process*, 10 CHEM. BIOCHEM. ENG. QUARTERLY 103-106 (1996).

<sup>8</sup> Desforges et al., US 5,252,136, issued Oct. 12, 1993.

<sup>9</sup> Tinembart et al, US 2002/0058683 A1, published May 16, 2002.

to extruded and dried food compositions, not to liquid compositions, and certainly not to liquid compositions comprising a medicament, a flavorant, and water, wherein that liquid composition is essentially free of sugars and is adapted for use by a companion animal” (App. Br. 5). Appellant contends that “[n]othing in Burkhalter, Sunvold, Fahey, and Sunvold ‘258 even remotely suggests that beet pulp could be added to a liquid composition.” (App. Br. 5). Appellant contends that “the objective of Desforges is to produce a sugar composition whereas the claims of the current application are directed towards a liquid composition which is essentially free of sugars” (App. Br. 6).

The issue with respect to this rejection is: Does the evidence of record support the Examiner’s finding that Chu, Burkhalter, Sunvold, Fahey, Sunvold ‘258, Ježek, and Desforges render claim 1 obvious?

*Findings of Fact*

1. Chu teaches

admixing a bacterial or viral antigen with a water soluble palatable flavorant, further admixing the antigen and flavorant mixture with a water soluble vehicle for oral administration of the vaccine to an animal in order to provide protection against disease associated with infection by the admixed antigen and to induce the increased intake of the vaccine with the flavorant.

(Chu, abstract).

2. Chu teaches that the vaccine stock solution is added to water, with the smallest amounts being 250-1500 mL for dogs and cats, up to 45 L for cows (*see* Chu 5 ¶ 0088). Chu teaches that the “Dosatron was connected to the stock solution container and the water proportioner was adjusted to

deliver one ounce per gallon of water to the vaccinated pigs” (Chu 7 ¶ 0124).

3. Burkhalter teaches that “[b]eet pulp was chosen as a second control because it is the most common source of fiber added to commercial dog diets” (Burkhalter 1979, col. 1).

4. Sunvold teaches that “[p]roviding a source of moderately fermentable fiber in cat diets promotes the formation of fermentation end products that may be important in maintaining the health of the lower gastrointestinal tract of cats” (Sunvold 2338, col. 1).

5. Fahey teaches that “[b]eet pulp levels up to 7.5% of diet DM appear acceptable as a dietary fiber source in a meat-based canine diet” (Fahey abstract).

6. Sunvold ‘258 teaches that the “fermentable fibers may be any fiber source which intestinal bacteria present in the animal can ferment to produce significant quantities of short-chain fatty acids . . . Preferred fibers include beet pulp” (Sunvold ‘258, col. 3, ll. 48-54).

7. Ježek teaches that “[c]onsiderable quantites of dietary fibres are contained in sugar beet pulp as by products in saccharosse production” (Ježek abstract).

8. Desforges teaches that “soluble sugar beet fibre has cholesterol lowering properties, i.e. has a hypocholestromaemic effect. Soluble fibres also have a beneficial effect on blood glucose and mineral availability” (Desforges, col. 2, ll. 14-17).

9. Desforges teaches “a sugar composition consisting of from

90 to 99% by weight sugar and from 10 to 1 % by weight of a non-gelling water-soluble dietary fibre” (Desforges, col. 2, ll. 44-46).

10. The Specification mentions the use of beet pulp four times, first at page 23, noting that in a pre-mix of vegetable ingredients, beet pulp may be included along with flax and other vegetables (Spec 23, ll. 1-2). Beet pulp is also listed as a minor component representing 0.4 wt% of the composition in Examples 1-3 (see Spec. 24-27).

### *Principles of Law*

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). “If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability.” *Id.* at 417.

### *Analysis*

Chu teaches a liquid composition comprising a medicament, a flavorant and water (FF 1-2). Desforges teaches that “soluble sugar beet fibre has cholesterol lowering properties, i.e. has a hypocholestromic effect. Soluble fibres also have a beneficial effect on blood glucose and mineral availability” (Desforges, col. 2, ll. 14-17; FF 8)<sup>10</sup>.

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<sup>10</sup> We consider the remaining references cumulative to the teachings of Chu and Desforges. The Board may rely on less than all of the references applied by an examiner in an obviousness rationale without designating it as a new ground of rejection. *In re Bush*, 296 F.2d 491, 496, 131 USPQ 263, 266-67 (CCPA 1961); *In*

Applying the *KSR* standard of obviousness to the findings of fact, we conclude that the ordinary artisan would have incorporated the soluble beet pulp as taught by Desforges into the liquid composition of Chu in order to obtain the benefits of cholesterol lowering, beneficial blood glucose and improved mineral availability (FF 8). Such a combination is merely a “predictable use of prior art elements according to their established functions.” *KSR*, 550 U.S. at 417.

Appellant contends that “the objective of Desforges is to produce a sugar composition whereas the claims of the current application are directed towards a liquid composition which is essentially free of sugars” (App. Br. 6).

We are not persuaded. While Desforges teaches synthesis of sugar along with the beet fiber, Appellant’s Specification states that “the term ‘essentially free of sugars,’ for the purposes of the invention, means that the liquid compositions herein comprise less than about 10% sugars” (Spec. 6, ll. 3-5). Thus, the vaccine composition of Chu can include up to 10% of the sugar composition of Desforges while still satisfying the “essentially free of sugars” requirement of the claim as interpreted in light of Appellant’s Specification.

Chu teaches that the vaccine stock solution is added to water, with the smallest amounts being 250-1500 mL for dogs and cats, up to 45 L for cows (*see* Chu 5 ¶ 0088; FF 2). Chu teaches that the “Dosatron was connected to the stock solution container and the water proportioner was adjusted to

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*re Boyer*, 363 F.2d 455, 458, n.2, 150 USPQ 441, 444, n.2 (CCPA 1966).



deliver one ounce per gallon of water to the vaccinated pigs” (Chu 7 ¶ 0124; FF 2). Since the final vaccine composition represents one ounce of the stock solution diluted into a gallon of water (128 ounces), the dilution factor is 128 fold. Even assuming the stock solution is composed almost entirely of a 100% beet sugar solution, the dilution would result in less than 1% sugar in the final vaccine composition (FF 2).

“In reviewing the examiner’s decision on appeal, the Board must necessarily weigh all of the evidence and argument.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). When we weigh all of the evidence in this case, we note that beet pulp was barely mentioned in Appellant’s Specification (FF 10) and that no particular reason for the addition of beet pulp to the liquid solution was given in Appellant’s Specification. The original claims do not mention beet pulp (*see* Spec. 27-30, original claims 1-39).

Just as secondary considerations of unexpected results or commercial success, when weighed with the obviousness case may result in a conclusion of non-obviousness, so too, the evidence that the selection of beet pulp for use in the liquid composition was entirely arbitrary and lacked any reason or inventive basis in the original specification or claims provides an additional basis for finding that the evidence, when weighed as a whole, supports the Examiner’s finding that the claimed invention is obvious.

#### *Conclusion of Law*

The evidence of record supports the Examiner’s finding that Chu, Burkhalter, Sunvold, Fahey, Sunvold ‘258, Ježek, and Desforges render claim 1 obvious.

*B. 35 U.S.C. § 103(a) over Tinembart, Chu, Burkhalter, Sunvold, Fahey, Sunvold '258, Ježek, and Desforges*

Tinembart teaches “administration, e.g. orally. . . of an amount of the combination according to the invention, which is effective against fleas, of a compound of formula (I) and a compound of formula (II)” (Tinembart 4 ¶ 0057). The Examiner finds that these are “lufenuron and nitenpyram” (Ans. 7), found in claims 6 and 7. The Examiner finds it obvious “to add beet pulp fiber to the composition of Tinembart et al. because beet pulp fiber is well-known as a commercial source of dietary fiber for use in pet foods, and soluble beet fiber has cholesterol lowering properties (i.e., hypocholestromic effect), and a beneficial effect on blood glucose and mineral availability” (Ans. 9).

The Examiner provides sound fact-based reasoning for combining Tinembart with Chu and Desforges. We adopt the fact finding and analysis of the Examiner as our own. Appellants argue the underlying obviousness rejection over Chu and Desforges, but Appellants do not identify any material defect in the Examiner’s reasoning for combining Tinembart with Chu and Desforges. Since Appellants only argue the underlying rejection of Chu and Desforges which we affirmed above, we affirm this rejection for the reasons stated by the Examiner.

#### CONCLUSION

In summary, we affirm the rejection of claim 1 under 35 U.S.C. § 103(a) as obvious over Chu, Burkhalter, Sunvold, Fahey, Sunvold '258, Ježek, and Desforges. Pursuant to 37 C.F.R. § 41.37(c)(1)(vii)(2006), we

also affirm the rejection of claims 2-5<sup>11</sup>, as these claims were not argued separately<sup>12</sup>.

We affirm the rejection of claims 1, 6, and 7 under 35 U.S.C. § 103(a) as obvious over Tinembart, Chu, Burkhalter, Sunvold, Fahey, Sunvold '258, Ježek, and Desforges. Pursuant to 37 C.F.R. § 41.37(c)(1)(vii)(2006), we also affirm the rejection of claims 2-5, as these claims were not argued separately.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv)(2006).

AFFIRMED

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<sup>11</sup> We note that the Examiner identifies where the limitations of claims 2-5 are found in the Answer (*see* Ans. 11).

<sup>12</sup> *See In re Lovin*, 2011 WL 2937946 at 7 (“[W]e hold that the Board reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art. Because Lovin did not provide such arguments, the Board did not err in refusing to separately address claims.”)